

a Division of Environmental Management Strategies, Inc.

ATTORNEY-CLIENT WORK PRODUCT PRIVILEGED AND CONFIDENTIAL

June 12, 2009

Justin Massey Miller, Axline & Sawyer 1050 Fulton Avenue, Suite 100 Sacramento, California 95825

Subject: Groundwater Sampling Description and Soil Boring Logs

Former Arnold Engineering Site, Fullerton California

Dear Mr. Massey:

In accordance with our Standard Agreement for Professional Services, Environmental Support Technologies (EST) is pleased to submit the enclosed soil boring logs for the five borings drilled for groundwater sample collection in relation to the former Arnold Engineering site. Attached is a site map showing the approximate locations of the soil borings. Boring FAE-GW1 was drilled at 1601 E. Orangthorpe Avenue (Ideal Spa Covers). Borings FAE-GW2, FAE-GW3, FAE-GW4 and FAE-GW4A were drilled at 1501-1521 E. Orangthorpe Avenue (Fullerton Business Center).

A brief description of groundwater sampling at each location is provided below:

FAE-GW1 – 1601 E. Orangethorpe Avenue

Drilling for groundwater sampling at location FAE-GW1 was performed on April 28, 2009 using hollow-stem auger drilling equipment supplied by Cascade Drilling, Inc. representing other interested parties were present for split groundwater samples. Soil samples were collected at five foot vertical intervals during drilling for logging purposes. Drilling was advanced from the surface to approximately 130 feet below the ground surface (bgs) where groundwater was encountered. Groundwater samples were collected using Hydropunch IITM sampling equipment and through the hollow-stem auger. The Hydropunch sampling equipment was cleaned before use by first steam-cleaning and then rinsing with distilled water. equipment-blank water sample was provided to OCWD by pouring distilled water through the Hydropunch II sampler after the first cleaning event. The Hydropunch II sampler was driven ahead of the auger to a depth of approximately 140 feet bgs for water sample collection. Sufficient water was produced by the Hydropunch equipment for most of the OCWD water sample needs. However, three drives of the Hydropunch equipment failed to produce a sufficient amount of water for all samples necessary. Therefore, groundwater samples were collected through the hollow-stem auger using a new disposable bailer and nylon line and supplied to OCWD and other consultants. The boring was sealed with hydrated bentonite grout and paved with concrete after completion of sampling.

FAE-GW2 – 1501-1521 E. Orangethorpe Avenue

Drilling for groundwater sampling at location FAE-GW2 was performed on May 6, 2009 using hollow-stem auger drilling equipment supplied by Cascade Drilling, Inc. Soil samples were collected at five foot vertical intervals during drilling for logging purposes. Drilling was advanced from the surface to approximately 130 feet below the ground surface (bgs) where groundwater was encountered. Groundwater samples were collected using Hydropunch IITM groundwater sampling equipment. The Hydropunch sampling equipment was cleaned by first steam-cleaning and then rinsing with distilled water before use. An equipment-blank water sample was provided to OCWD by pouring distilled water through the Hydropunch II sampler after the first cleaning event. The Hydropunch II sampler was driven ahead of the auger to a depth of approximately 145 feet bgs for water sample collection. Four drives of the Hydropunch equipment produced sufficient water for all of the OCWD water sample needs. The boring was sealed with hydrated bentonite grout and paved with concrete after completion of sampling.

FAE-GW3 – 1501-1521 E. Orangethorpe Avenue

Drilling for groundwater sampling at location FAE-GW1 was performed on May 7, 2009 using hollow-stem auger drilling equipment supplied by Cascade Drilling, Inc. Soil samples were collected at five foot vertical intervals during drilling for logging purposes. Drilling was advanced from the surface to approximately 130 feet below the ground surface (bgs) where groundwater was encountered. Groundwater samples were collected using a Hydropunch IITM and through the hollow-stem auger. The Hydropunch sampling equipment was cleaned by first steam-cleaning and then rinsing with distilled water before use. An equipment-blank water sample was provided to OCWD by pouring distilled water through the Hydropunch II sampler after the first cleaning event. The Hydropunch II sampler was driven ahead of the auger to a depth of approximately 140 feet bgs for water sample collection. Sufficient water was produced by the Hydropunch equipment for most of the OCWD water sample needs. However, four drives of the Hydropunch equipment failed to produce a sufficient amount of water for all duplicate samples required by OCWD. Therefore, groundwater samples were collected through the hollow-stem auger using a new disposable bailer and nylon line and supplied to OCWD personnel. The boring was sealed with hydrated bentonite grout and paved with concrete after completion of sampling.

FAE-GW4 – 1501-1521 E. Orangethorpe Avenue

Drilling for groundwater sampling at location FAE-GW4 was performed on May 8 2009 using hollow-stem auger drilling equipment supplied by Cascade Drilling, Inc. Soil samples were collected at five foot vertical intervals during drilling for logging purposes. Drilling was advanced from the surface to approximately 65 feet below the ground surface (bgs) where "perched" groundwater was encountered in an approximate 5 foot layer of sand that is underlain by stiff clay at approximately 64 feet bgs. Hollow-stem auger drilling was discontinued at this point and groundwater samples were collected by installation of a temporary PVC well. The well was constructed using 5 feet of new 2-inch diameter PVC well screen with 0.010 inch slots from approximately 61 feet to 66 feet bgs and new 2-inch PVC blank casing from the top of the

screen to the surface. The annular space around the screen was packed with #2/16 sillica well sand. The total depth of the temporary well was approximately 66 feet. The depth to water in the temporary well was measured at approximately 62.4 feet bgs. Approximately 1.5 gallons of groundwater were bailed from the well before groundwater sample collection. Groundwater samples were collected using a new disposable bailer and nylon line and supplied to OCWD personnel. The well casing was removed from and the boring was sealed with hydrated bentonite grout and paved with concrete after completion of sampling.

FAE-GW4A – 1501-1521 E. Orangethorpe Avenue

Drilling for groundwater sampling at location FAE-GW4A was performed on May 20 and 21, 2009 using sonic drilling equipment supplied by Cascade Drilling, Inc. This boring was located approximately 8 feet north of FAE-GW4. This boring was advanced to collect deeper water located near 130 feet bgs. Continuous soil samples were collected using the sonic drill pipe for logging purposes. Eight-inch diameter sonic drill pipe was advanced to a depth to approximately 70 feet bgs. Approximately five feet of bentonite pellets were placed in the drill pipe from approximately 65 to 70 feet bgs. A 6-inch diameter sonic drill pipe was advanced through the 8inch pipe to approximately 110 feet bgs. A 4 inch diameter sonic pipe was advanced through the 6-inch pipe to approximately 130 feet bgs where water-saturated sand was encountered. Attempts were made to collect water samples using Hydropunch II sampling equipment and a temporary 2-inch PVC well. These methods failed to produce water. Groundwater samples were collected using standard Hydropunch equipment which consisted of a Hydropunch sampler and new one-inch diameter PVC well screen. The Hydropunch sampler was driven ahead of the auger to a depth of approximately 145 feet bgs for water sample collection between approximately 140 and 145 feet bgs. Groundwater samples were collected using a stainless steel bailer and new nylon line and supplied to OCWD personnel. The Hydropunch sampling equipment and stainless steel bailer were cleaned by first steam-cleaning and then rinsing with distilled water before use. An equipment-blank water sample was provided to OCWD by pouring distilled water through the Hydropunch sampler after the first cleaning event. The boring was sealed with hydrated bentonite grout and paved with concrete after completion of sampling.

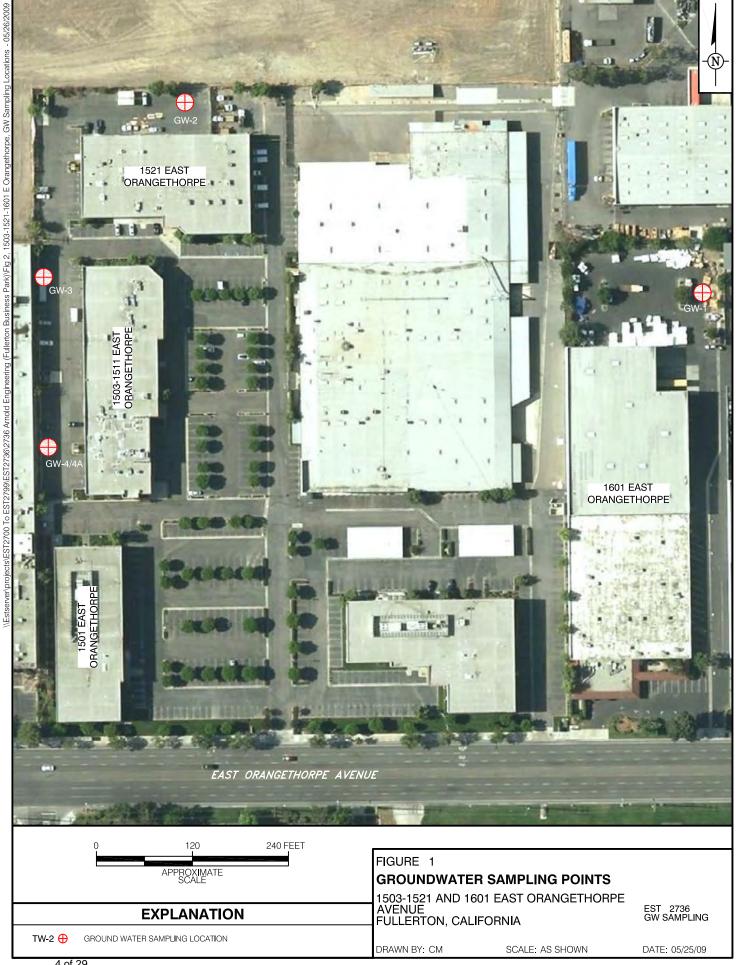
Should you have any questions or comments please contact me at (949) 679-9500.

Sincerely,

Environmental Support Technologies

Michael Marello, PG, CHG, REA I Project Manager/Senior Hydrogeologist

cc: David Mark/OCWD EST Project File 2736



	SOIL BORING LOG AND MONITORING WELL CONSTRUCTION LOG Project Name: MAS/OCWD Project Location: MAS/OCWD 1601 East Orangethorpe Avenue, Fullerton, California 2736 Project Name: Type of Rig: Cascade CME-85 Logged By: M. Marello, PG, 5339 O4/28/2009 FAE-GW1 Project No. Project N			i LOG A	וטוא טוא			ELL CONSTRUCT	TON LOG	Boring No.		
)					angethorpe Aveni	ue, Fullerton, (California		
Driller: Type of Rig: Cascade CME-85			Type/Size of Auge	r:								
ogg	Cascade CME-85 8-Inch O.D. HS ogged By: Date Drilled: Checked By: M. Marello, PG, 5339 04/28/2009				10	1 of 6						
VI. I	gged By: Date Drilled: Checked By: . Marello, PG, 5339 04/28/2009 1 o			1 1016								
										punch 2		
Statio	Dept	h of W	ater in Wel	II: NA				Slot Size and Filter Pack	c NA			
otal	Depth			140 Feet				Type/Size of Soil Sampl	er: 2-Inch	I.D. x 18-Inch	Split Barrel	
ě		SOII	L/ROCK S	SAMPLE D	1	et		DESCRIPTION	OF LITHOLOGY			
Depth in Feet	<u> </u>	ಕ		Field PID (ppm)	Graphic Log	Depth in Feet	Standard	classification, texture, i	elative moisture, d ISCG designation	ensity, stiffness,	WELL/BORING GRAPHIC	1
Jeptr	Interval	Blow Ct.	Time	Fiel P	Gra)epth	And	With	Some	Trace		
_						-0	(40-50%) As	(25-40%) sphalt Surface ≈4 In.	(10-25%)	(0-10%)		£
						-					9000000	
					, , , , , , , , , , , , , , , , , , ,	_						1
						_	Ha	and auger to 5 Feet				犭
						_		1.05				1
5	=	4 5 7	08:40			5	FII	ne sand (SP), light olive	-brown, (2.5Y, 5/4)	, dry, no odor		30
	\geq	7				-						
						-						
						-						
						-						犭
0	\rightarrow	9	08:45			10	Fi	ne sand (SP), light olive	-brown, (2.5Y, 5/4)	, dry, no odor		
		9 11 13		NA		-						
	\vdash	'5										
						L						
_			00.50			4.5	14.	all avaded as a 1000 st	in barne (0.5)	1/0) almos e		
5	=	12 12 14	08:50			15	W	ell graded sand (SW) ol	ive-prown, (2.5Y, 4	+/3), ary, no odor		
	\geq	14										
					ППП	- †						
						-						
						-						
20	\rightarrow	11	08:55			20	Si	lt, some clay, trace sand	d (ML), very dark g	rayish-brown		
		12 14					(2	.5Y, 3/2), slightly moist t	o moist, no odor™	1		
	$\overline{}$	'4				_						
						L						
		-		1		ıl						1

			BORING	i LOG A	טאו	MC		RING WELL CONSTR	UCTION LOG		FAE-GW1	
	ct Nar S/O	ne: CWD)					ct Location: 1 East Orangethorpe A	venue. Fullerto	on. California	Project No. 2736	
Drille							Type	of Rig: E-85	Type/Size of 8-Inch O	Auger:		
Logg	ed By:						Date	Drilled:	Checked By:			
M. N	viare		PG, 533 L/ROCK S	AMPLE D	ATA		04/2	28/2009			2 of 6	1
Feet			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Т		- Ee		TION OF LITHOLO		WELL (BODING	
Depth in I	val	<u>ن</u> ک	ø.	Field PID (ppm)	100	Grapine Log	Depth in Feet	Standard classification, tex odor-stain	ing, USCG designa	tion	WELL/BORING GRAPHIC	Description
Dep	Interval	Blow	Time	iii)		5	Dep	And With (40-50%) (25-40%)	Son (10-25)			Des
25		13 16 16	09:01				- • 25 - -	Silt, trace sand (ML), odor	dark grayish-browi	n (2.5Y, 4/2), dry, no		
30		10 16 17	09:07				- 30 -	Silt, some clay, trace slightly moist, no odd		rowп (2.5Y, 4/3),		
35		10 12 15	09:25				- - 35 -	Silt, some clay, trace slightly moist, no odc		rown (2.5Y, 4/3),		Bentonite Grout
40		14 16 19	09:20	NA NA			- 40	Silt with clay (ML), ol	ive-brown (2.5Y, 4/	3), moist, no odor		Boring Backfilled with Bentonite Grout
45		13 15 18	09:30				45	Clay, some silt, trace odor, stiff	sand (CL), olive (5	Y, 4/3), moist, no		3
50 :		15 17 17	09:37				50	Fine to medium sand slightly moist to dry,		own (2.5Y, 5/3),		

		SORING	i LOG A	AND MOI		RING WELL CONSTRU	CTION LOG	Boring No.	AE-GW1	
Project N MAS/C)				ct Location: 1 East Orangethorpe Ave	enue Fullerton C	alifornia	Project No. 2736	
Driller:				<u> </u>	Туре	of Rig:	Type/Size of Auger:			
Casca Logged E					CMI	E-85 Drilled:	8-Inch O.D. H Checked By:	<u>S</u>		
		PG, 533	9			28/2009	Offecked by.		3 of 6	
		L/ROCK S		ATA		DESCRIPTION	ON OF LITHOLOGY			
Feet		-	₽ (, <u>o</u>	Depth in Feet	Standard classification, textur		nsity stiffness	WELL/BORING	5
를 를	ರೈ	ø.	Field PID (ppm)	Graphic	를	odor-staining	g, USCG designation		GRAPHIC	Description
Depth in I	Blow Ct.	Time	ji)	g	Dep	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		Des
55 60	X X X X X 10 12 16	00:00	NA		- 55 - - - - - 60	Fine to medium sand, s 4/3), moist, no odor	ome silt, (SP-SM), olive			
65	9 11 13	09:59			- 65 - -	Clay, trace silt and sand sand sand sand sand slightly moist to dry, no		n (2.5 Y , 3/3),		kfilled with Bentonite Grout
70	12 14 17	10:06			- 70 - -	Fine to medium sand w olive-brown (2.5Y, 3/3),	ith silt, trace coarse sar moist, no odor	nd (SM), dark		Boring Backfilled
75	16 19 21	10:15			- - 75 - -	Clay, some silt (CL), da moist, no odor, stiff	rk olive-brown (2.5Y, 3/	/3), slightly		
80	12 16 17	10:33			- - 80	Silt and clay, trace sand slightly moist, no odor	d (ML-CL), olive-brown	(2.5Y, 4/3),		

roject N		Oning	LUG A	AND IVIC		RING WELL CONSTRUC	TION LOG	F/	AE-GW1 Project No.	
MÁS/	OCWE)			160	1 East Orangethorpe Aver	nue, Fullerton, C	alifornia	2736	
Oriller: Casca	ıde				Type CME	of Rig: =-85	Type/Size of Auger: 8-Inch O.D. H			
ogged l	Ву:	DO 500			Date I	Orilled:	Checked By:	<u> </u>	4 - 4 0	_
vi. ivia		PG, 533 L/ rock s		ΔΤΔ	1 04/2	28/2009			4 of 6	Т
ja	- 1 - 1	L, HOOK O	1	T	#		N OF LITHOLOGY		<u> </u>	l
ᄪ	್ ರ		Field PID (ppm)	Graphic	ä	Standard classification, texture odor-staining,	, relative moisture, der USCG designation	nsity, stiffness,	WELL/BORING GRAPHIC	
Depth in Feet	Blow Ct.	Time	Fie G	_ ভূ _	Depth in Feet	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		
35	14 15 19 15 19 23	10:43	NA		- -85 - - - -90	Clay and silt, trace sand moist, no odor Silt, trace clay and sand 3/2), slightly moist, no oc	(CL-ML), olive-brown	(2.5Y, 4/4),		
05	19 20 23	11:04			*-95 -	Silt and fine to medium s to slightly moist, no odor		(10YR, 4/3), dry		
00	11	11:09			100	Fine to medium sand, so moist, no odor	ome silt (SP), olive-bro	wn (2.5Y, 4/3),		
	11/14/17					Clay (CL), dark olive-bro	wn (2.5Y, 3/3), moist,	stiff, no odor		
05	15 17 21	11:23			105	Clay, some silt (CL), oliv	e-brown (2.5Y, 4/3), m	oist, no odor		
						Clay with silt (CL-ML), ol	ive-brown (2.5Y, 4/3),	moist, no odor		

SOI		LOG A	ND MOI		RING WELL CONSTRUC	TION LOG	Boring No.	AE-GW1	
roject Nam MAS/OC					ot Location: 1 East Orangethorpe Aven	ue. Fullerton. Ca	alifornia	Project No. 2736	
Oriller:				Type CMI	of Rig:	Type/Size of Auger:		-l	
Cascade .ogged By:					Drilled:	8-Inch O.D. HS Checked By:	<u> </u>		
<u>И. Marel</u>	lo, PG, 533			04/2	28/2009			5 of 6	1
ॹ ├──	SOIL/ROCK S			et	DESCRIPTION	N OF LITHOLOGY			_ ا
<u> </u>	ಕೃ	Field PID (ppm)	Graphic Log	Depth in Feet	Standard classification, texture, odor-staining.	relative moisture, den USCG designation	sity, stiffness,	WELL/BORING GRAPHIC	Description
Depth ir	Blow Ct.	Field PI	Gra	epth	And With	Some	Trace	-	escr
			/////		(40-50%) (25-40%)	(10-25%)	(0-10%)		
roject Nam MAS/OC Viller: Cascade ogged By: M. Marel	9 11 13			-1 10 -	Clay with silt (CL-ML), oliv	re-brown (2.5Y, 4/3), n	noist, no odor		
15	50 X X			 -115	Fine sand and silt (SP-SN moist, hard, no odor	l), olive brown (2.5Y, 4	l/3), slightly		
20	23 50 X	NA		- - -120 -	Well graded sand, trace g 5/3), dry, hard, no odor	gravel (SW), light olive	-brown (2.5Y,		kfilled with Bentonite Grout
	28 50 x			- -125 - -	Well graded sand, some 5/3), slightly moist, hard, i	gravel (SW), light olive	e-brown (2.5Y,		Boring Backfilled w
30	28 12:17 50 x			-130 - -	Fine to medium sand, sor (2.5Y, 4/4), water saturate		olive-brown		
35				- -135 - -					

- i - <i>-</i> -	ame:					ct Location:				Project No.	
/IAS/C	CWD				160	1 East Orang of Rig:	ethorpe Aven	ue, Fullerton, Ca Type/Size of Auger:	alifornia	2736	
Casca					CME			8-Inch O.D. H	3		
ogged B		20 500				Drilled:	-	Checked By:			
n. Mai		POCK 6	AMPLE D	ATA	04/2	28/2009				6 of 6	$\overline{}$
	JOIL	HOCKS		1	- # [DESCRIPTION	OF LITHOLOGY			
Deptn in reet	ž.	Φ	Field PID (ppm)	Graphic Log	Depth in Feet		odor-staining, l	relative moisture, der USCG designation		WELL/BORING GRAPHIC	
inte Ce	Blow	Time	iĒ T	6	Deb	And (40-50%)	With (25-40%)	Some (10-25%)	Trace (0-10%)		
40					- -140- - -145 - -150 - - -155 - - -160 -	Ground	water sample colle unch 2 and throug	ected at approximatel			

	ct Na					Project Lo			A		AE-GW2 Project No.	_
Drille	r:	CWE	,			Type of R	≀ig:	ast Orangethorpe	Type/Size of Auger:		2736	
	cad ed By					CME-9			8-Inch O.D. HS	3	T	
			PG, 533	9		05/06/			Chicana Ly.		1 of 6	
		\	VATER	AND W	ELL DAT	Ά		Total Depth of Well Con	npleted: NA			
Dept	h of W	ater F	irst Encoun	ntered: ≈	120 Feet			Screen Type, Dia., Inter	val: Hydrop	unch 2		
Statio	Dept	h of V	/ater in Wel	i: NA				Slot Size and Filter Pack	c NA			
Total	Depti	n of Bo	oring: ≈ 1	40 Feet				Type/Size of Soil Sampl	er: 2-Inch I.	D. x 18-Inch	Split Barrel	
et		SOI	L/ROCK S	AMPLE D	ATA	t e		DESCRIPTION	OF LITHOLOGY			
Depth in Feet	le.	ಕ		Field PID (ppm)	Graphic Log	Depth in Feet	Standard	classification, texture, odor-staining.	relative moisture, den JSCG designation	sity, stiffness,	WELL/BORING GRAPHIC	1 1 1
)epth	Interval	Blow Ct.	Time	Field (p)	Gra	Septh	And	With	Some	Trace	- GIATIO	Dogoriphion
0	_		'			0	(40-50%) As	(25-40%) sphalt Surface ≈4 In.	(10-25%)	(0-10%)		
5				NA		- - - - 5 - -	Ai:	r-Knife to approximately ne sand and silt (SM-ML oist, no odor (hand auge	_), dark grayish-brow	n, (2.5Y, 4/2),		Bentonite ~
10		5 6 6	07:56	0		- · 10 - -		It with fine sand, trace c 2), moist, no odor	lay (ML), dark grayisl	n-brown, (2.5Y,		ptopito Grout
15		<u>5</u> 7 11	08:00	0.1		- • 15 -		ay, some silt, trace sand ghtly moist to moist, no		2.5Y, 4/3), 		Coring Bookfilled with Bontonite
20		10 10 11	08:03	0		- - - 20 - -		it, some fine sand (ML), ghtly moist, no odor	dark grayish-brown	(2.5 Y , 4/2),		Soliton

			ORING	LOG A	AND MOI		RING WELL CONSTRU	CTION LOG	Boring No.	AE-GW2	
Proje MA	ect Nai)				ct Location: 1-1521 East Orangethorp	oe Avenue, Fullerto	on, California	Project No. 2736	
Drille Cas	er: scad	6				Туре	of Rig: E-95	Type/Size of Auger: 8-Inch O.D. HS			
Logo	ged By	:	DO 500			Date	Drilled:	Checked By:			
IVI.	Mare		PG, 533 L/ROCK s		ATA	05/0	06/2009	ON OF LITUOLOGY		2 of 6	
Feet			,		ı	Feet		ON OF LITHOLOGY	oit stiffees	WELL BORING	۾
Depth in Feet	val	Blow Ct.	ø.	Field PID (ppm)	Graphic Log	Depth in Feet		g, USCG designation		WELL/BORING GRAPHIC	Description
Dep	Interval	Blov	Time) H	5	Dep	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		Des
Proje MA Drille Cas Logs M. teet u type 1 - 25 30	M	11 15 20	08:18	0.1		- - 25 -	Silt, some fine sand (MI slightly moist, no odor	L), dark grayish-brown (2	2.5Y, 4/2), 		
- - • 30 - -		10 10 12	08:25	0.2		- - 30 -	Clay with silt, some san no odor	nd (CL), olive-brown (2£	5Y, 4/3), moist,		
- - 35 - -		9 <u>10</u> 10	08:29	0.2		- - 35 - -	Silt, trace clay and sand sand sand sand sand sand sand	d (ML), dark grayish-bro	wn (2.5Y, 4/2),		dilled with Bentonite Grout
- - - 40 - -		8 10 14	08:32	0.3		- - 40 - -	Silt, trace clay and sand moist, no odor	d (ML), dark grayish-bro	wn (2.5Y, 4/2),		Boring Backfilled with
- - 45 -		10 12 17	08:36	0.3		- • 45 -	Silt and very fine sand (no odor	(ML-SM), olive-brown (2	5Y, 4/3), dry,		
- - · 50 - -		8 ₁₀ 16	08:40	0.2		- - • 50	Fine to medium sand (\$ odor	SP), olive-brown (2.5Y, 4	/3), dry, no		

	Name:		1007			RING WELL CONSTRUCT Location:		F.	AE-GW2 Project No.	
MAS/	OCWE)			150	1-1521 East Orangethorp	e Avenue, Fuller	ton, California		
Oriller: Casca	ade				CM	of Rig: E-95	Type/Size of Auger 8-Inch O.D. H			
ogged		PG, 533	:a			Drilled: 06/2009	Checked By:		3 of 6	
		L/ROCK S		ATA			N OF LITHOLOGY		3010	
Depth in Feet	- H		Field PID (ppm)	Graphic Log	Depth in Feet	Standard classification, texture		nsity, stiffness,	WELL/BORING GRAPHIC	ption
Depth	Interval Blow Ct.	Time	Field (pr	Gra	Depth	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		Description
55	11 17 23	08:44	0.4		- - 55	Fine to medium sand (SI olive-brown (2.5Y, 5/3), o		and, light		
60	81111	08:47	0.3		- 60	Clay, trace silt and sand moist, stiff, no odor	(CL), dark olive-browi	n (2.5 Y , 3/3),		
55	8 11 12	08:51	0.1		- 65 -	Clay, trace silt (CL), dark no odor	: olive-brown (2.5Y, 3/	3), moist, stiff,		filled with Bentonite Grout —
70	10 14 18	09:06	0.4		- - 70 -	Clay and silt (CL-ML), oli	ive-brown (2.5Y, 4/3),	moist, no odor,		Boring Backfilled v
75	36 50 ×	09:15	0.2		- - 75 -	Clay and silt, some sand 3/3), slightly moist, no o		orown (2.5Y,		
30	21 23 24	09:21	0.3		- 80	Silt, some clay, trace fine slightly moist to moist, v		wn (10Y, 3/3),		

		BORING	LOG A	AND MOI		RING WELL CONSTRUC	CTION LOG	Boring No.	AE-GW2	
roject Na /IAS/O)				ct Location: 1-1521 East Orangethorp	e Avenue. Fullert	on. California	Project No. 2736	
riller: Cascad					Туре	of Rig:	Type/Size of Auger: 8-Inch O.D. H			
ogged By	<i>r</i> :				Date	Drilled:	Checked By:	<u> </u>	<u> </u>	
1. Mare		PG, 533			05/0	06/2009			4 of 6	
eet	5011	L/ROCK S		7	eet		N OF LITHOLOGY			_
Depth in Feet	× Ct.	<u>ø</u>	Field PID (ppm)	Graphic Log	Depth in Feet		, USCG designation		WELL/BORING GRAPHIC	Description
	Blow	Time	ш		Dep	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		ĕ
35	5 19 25	09:28	0.3		- - 85 -	Clay, some silt, trace sal odor, stiff	nd (CL), brown (10Y, 4	/3), moist, no		
00	10 14 18	09:39	0.3		- - 90 -	Silt, trace clay and fine s moist, no odor, stiff	and (ML), brown (10Yl	R, 4/3), slightly		ut
	17 24 30	09:47	0.4		- - •95 -	Clay, trace silt and fine s moist, very stiff, no odor	and (CL), olive-brown	(2.5YR, 4/3), 		dilled with Bentonite Grout
00	12 14 16	09:52	0.5		- - 100 -	Clay, some silt, trace sa moist, no odor, stiff	nd (CL), olive-brown (2	2.5Y, 4/3), 		Boring Backfill
05	17 12 18	09:56	0.6		- - -105 -	Well graded sand, some 3/3), dry to slightly mois		ve-brown (2.5Y,		
					-	Fine to medium sand, translation olive-brown (2.5Y, 5/3),				

		BORING	LOG	AND MO		RING WELL CONSTRU	ICTION LOG	Boring No.	AE-GW2	
Project N MAS/(Name: OCW[)				ct Location: 11-1521 East Orangethor	pe Avenue. Fuller	ton. California	Project No. 2736	
Oriller:					Туре	of Rig:	Type/Size of Auger	:	, 2.00	
Casca Logged						E-95 Drilled:	8-Inch O.D. H Checked By:	<u>S</u>	<u> </u>	
<u>М. Ма</u>		PG, 533			05/	06/2009			5 of 6	
± ├	SOI	L/ROCK S		1	e e	DESCRIPT	ION OF LITHOLOGY			
Depth in Feet	Blow Ct.	Φ	Field PID (ppm)	Graphic Log	Depth in Feet		ng, USCG designation		WELL/BORING GRAPHIC	Description
Dep	B	Time	i i	0	Dep	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		Des
10	15 20 25	10:01	0.6		-110 -		trace coarse sand (SP), , dry to slightly moist, no			
15	50 x x	11:38	0.7		- -115 -	Well graded sand (SW moist, no odor), light olive-brown (2.5°	Y, 5/3), slightly		
20 /	23 50 X	11:53	0.9		- -120 -	Well graded sand and 4/3), slightly moist, hai	gravel (SW-GW), olive-l d, no odor	orown (2.5Y,		Rentonite Grout
25	28 50 x	12:08	0.9		- -125 -	Fine to medium sand, olive-brown (2.5Y, 5/3)	trace coarse sand (SP), , dry to slightly moist, no	light o odor		Boring Backfilled with Bentonite
30	28 50 x	12:17	0.8		-130 -	Fine to medium sand, 4/2), water saturated, r	with silt (SM), dark gray	rish-brown (2.5 Y ,		
35					- -135 - -					

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M. Depth in Feet O

Project MA: Drille Cass M. I Dept Static Total - 0			BORING	LOG	AND MON		VELL CONSTRUCT	TION LOG	Boring No.	AE-GW3	
	ect Na S/O)			Project Location 1501-1521	: East Orangethorpe	Avenue, Fullerto	on, California	Project No. 2736	
Drille Cas	r: scad	e				Type of Rig: CME-95		Type/Size of Auger: 8-Inch O.D. HS			
Logg	ed By	:	PG, 533	9		Date Drilled: 05/07/2009		Checked By:		1 of 6	
					ELL DAT		Total Depth of Well Cor	mpleted: NA			
Dept	h of W	ater F	First Encour	ntered: ≈	130 Feet		Screen Type, Dia., Intel	rval: Hydropi	unch 2		
Statio	c Dept	h of V	Vater in Wel	⊩ NA			Slot Size and Filter Pac	k: NA			
Total	Depti	n of Bo	oring: ≈ 1	40 Feet	t		Type/Size of Soil Samp	oler: 2-Inch I.	D. x 18-Inch	Split Barrel	
et		SOI	L/ROCK S		ATA	et	DESCRIPTION	OF LITHOLOGY			
Depth in Feet	ral			Field PID (ppm)	Graphic Log	Standa	ard classification, texture, odor-staining, l	relative moisture, den USCG designation	sity, stiffness,	WELL/BORING GRAPHIC	Description
Depti	Interval	Field PID (ppm) Graphic Log O Depth in Feet					With	Some (10-25%)	Trace (0-10%)	-	200
0						0	Asphalt Surface ≈4 In.				-
_											
_						_	Air Knife to 8 Feet				
						_					Spite
5						5	Silt, some fine sand (ML)	, dark olive-brown, (2.	5Y. 3/3), drv.		Bentonite
							no odor (Hand auger on 0		,,,,,		
-						-					
-						_					
-				i.		-					
10		<u>6</u>	07:57	0.8		10	Clay same silt trass sam	d (OL) allian harrows (6) FV 4/0)		
-	$\backslash \backslash$	6 7 12					Clay, some silt, trace san moist, no odor	a (CL), olive-brown, (2	2.5 Y, 4/3),		1
-						-					
-					KKKA	-+					Coring Bookfillod with Bontonito
-						-					# # # # # # # # # # # # # # # # # # #
15		6	08:01	0.9			Silt, some clay, trace san moist, no odor	d (ML) olive-brown, (2	1.5Y, 4/3),		
-	\geq	6 6 1				-	,				# T
-						-					
-						_ †					
-						-					֓֟֝ <i>֡</i>
20		61810 10	08:04	0.9			Clay and silt, trace sand		own (2.5Y,		
-		10				-	3/3), slightly moist, no od	or			
-						-			,		
-						-					
				!	17.7.7.7.4.			Env	rironmental Su	pport Technolog	ies

			BORING	LOG	AND MOI		RING WELL CONSTRUC	TION LOG	Boring No.	AE-GW3	
	ct Nar S/O)			, ,	ct Location: 11-1521 East Orangethorpe	Avenue Fullerto	on California	Project No. 2736	
Drille	r:					Туре	of Rig:	Type/Size of Auger:			
	scad led By			-			E-95 Drilled:	8-Inch O.D. HS Checked By:	5	<u> </u>	
			PG, 533	9			07/2009			2 of 6	
ᇤ		SOII	L/ROCK S	AMPLE D	ATA	#	DESCRIPTION	N OF LITHOLOGY			
ו in Feet	ਲ	ಕ		Field PID (ppm)	Graphic Log	Depth in Feet	Standard classification, texture, odor-staining.	relative moisture, den USCG designation	sity, stiffness,	WELL/BORING GRAPHIC	Description
Depth in	Interval	Blow Ct.	Time	Fiel (p	👸	Dept	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		Desci
- - 25 - -		6 6 9	08:08	0.8		- - 25 - -	Fine to medium sand with 4/2), dry to slightly moist,		n-brown (2.5Y,		
- - 30 -		8 12 14	08:12	0.3		- 30	Clay (CL), olive-brown (2	.5Y, 4/3), moist, no odd	or		
- - - 35 -		11 15 20	08:18	0.5		- - 35	Fine to medium sand (SF no odor	r), light olive-brown (2.9	5Y, 5/4), dry,		entonite Grout —
- - 40 -		11 15 18	08:23	1.1		- - 40 -	Fine to medium sand, tra olive-brown (2.5Y, 5/4), d		ght		Boring Backfilled with Bentonite
- - 45 - -		14 17 20	08:26	0.6		- 45 -	Well graded sand, some (2.5Y, 4/2), dry, no odor	silt (SW-SM), dark gra	yish-brown		
- - 50 -		11 17 20	08:30	0.7	ja Tyri Byrd N	- - 50	Fine to medium sand (SF no odor	r), light olive-brown (2.	5Y, 4/2), dry,		
								Env	vironmental Sur	port Technolog	ies

	ct Nan						ct Location:	a Avanua Fullani		AE-GW3 Project No.	
VIA: Orille	S/OC r:	١٧٧٦	<u>'</u>			Type	1-1521 East Orangethorp	Type/Size of Auger:	on, California	2736	
	cade					CM	E-95	8-Inch O.D. H	S		
.ogg VI. N	_{ed By:} Mare	: illo. l	PG, 533	19			Drilled: 07/2009	Checked By:		3 of 6	
			_/ROCK S		ATA	Î		ON OF LITHOLOGY		00.0	
Depth in Feet	<u>_</u>	ಪ		Field PID (ppm)	Graphic Log	Depth in Feet	Standard classification, textur		nsity, stiffness,	WELL/BORING GRAPHIC	ption
Depth	Interval	Blow Ct.	Time	Fiek	Gra	Depth	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)	divinio	Description
55		10 10 11	08:34	0.2		- 55	Clay, some silt (CL), oli stiff	ve -brown (2.5Y, 4/3), m	noist, no odor,		
60		14 17 22	08:38	0.4		60	Fine to medium sand (S no odor	SP), light olive-brown (2	.5Y, 5/4), dry,		
65		12 16 19	08:43	0.9		- 65	Clay with silt, some san	id (CL-SC), brown (10Y	R, 4/3), moist,		Hilled with Bentonite Grout —
70		<u>5</u> 67	08:48	0.5		- 70	Clay, trace silt and fine moist, no odor, stiff	sand (CL), olive-brown	(2.5Y, 4/3),		Boring Backfilled w
75		<u>4</u> 7 9	08:53	0.9		7 5	Clay, trace silt and fine 3/3), moist, no odor, sti		rown (2.5Y,		
80		7 9 14	08:58	0.8		80	Clay, some silt and san no odor, stiff	d (CL), dark brown (10°	YR, 3/3), moist,		

Proje	SC ect Nar		BORING	LOG	AND MO		RING WELL CONSTRUC	TION LOG	F	AE-GW3 Project No.	
MÁ	S/O)			150	1-1521 East Orangethorpo	e Avenue, Fullerto	on, California	2736	
Drille Cas	r: scad	e				Type CM	of Rig: E-95	Type/Size of Auger: 8-Inch O.D. HS	}		
Logg	ed By	:	DO 500			Date	Drilled:	Checked By:		1 10	
IVI. I	ware		PG, 533 L/ROCK s		ΔΤΔ	05/0	07/2009			4 of 6	<u> </u>
Feet				T	1	eet		N OF LITHOLOGY			,
Depth in I	ka ka	ζ	Φ.	Field PID (ppm)	Graphic	Depth in Feet		e, relative moisture, den USCG designation	sity, stiffness,	WELL/BORING GRAPHIC	Dogorination
Dep	Interval	Blow Ct.	Time	Ä)	g	Dep	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		1
-							Clay, some silt and sand no odor, stiff	(CL), dark brown (10Y	R, 3/3), moist,		
- 85 -		<u>12</u> <u>15</u> 17	09:06	0.9		- - 85 -	Clay, trace silt (CL), brov	vn (10YR, 4/3), moist, n	o odor, stiff		
- 90 -		8191 <u>2</u>	09:12	0.8		- 90 -	Clay, trace silt and fine s no odor, stiff	and (CL), brown (10YR	, 4/3), moist,		0
- 95 -		10 11 14	09:17	0.3		- 95 _	Clay, some silt, trace sar moist, no odor, stiff	nd (CL), olive-brown (2.	5Y, 4/3),		filled with Desterite
- - 100 - -		12 14 21	09:23	07		- - 100 -	Silt, some clay (ML), bro	wn (10YR, 3/3), moist, r	no odor		lood well-d
- 105 - -		<u>6</u> 7 10	09:30			-105	Clay, trace silt and sand no odor, stiff	(CL), olive-brown (2.5Y	/, 4/3), moist,		
-						 	Well graded sand with g darl olive-brown (2.5Y, 3				

		BORING	LOG	AND MO		RING WELL CONSTRU	CTION LOG	Boring No.	AE-GW3	
	Name: OCWI)				ct Location: 11-1521 East Orangethorp	oe Avenue, Fullert	on, California	Project No.	
Driller: Casca	ade					of Rig: E-95	Type/Size of Auger: 8-Inch O.D. H		-	
Logged	By:	DC 500	20		Date	Drilled:	Checked By:		5 -4 0	
IVI. IVIE		PG, 533		PATA	05/0	07/2009	ON OF LITIES ON		5 of 6	Т
Feet			1	T	Feet	Standard classification, texture	ON OF LITHOLOGY	asib catiffeess	WELL/BODING	, ا
Depth in Feet	Interval Blow Ct.		Field PID (ppm)	Graphic Log	Depth in Feet	odor-stainin	g, USCG designation		WELL/BORING GRAPHIC	
Dep	Interval Blow Ct	Time	i ii)	5	Dep	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		2
110	12 15 18	09:36	1.2		110	Well graded sand with darl olive-brown (2.5Y,	gravel, some silt, trace (3/3), moist, no odor	clay (SW-SM),		
15	1 <u>2</u> 1 <u>5</u> 18	09:45	0.6		-1 15 -	Well graded sand, trac greyish-brown (10YR, 4				
20	30 50 X	09:54	0.6		120	Well graded sand and (2.5Y, 4/2), moist, no or		rayish-brown		
25	50-2 X X	10:02			125	No sample recovery at	125 feet			
30	30 50 x	10:20	0.7		130	Well graded sand, little 5/2), water saturated, n		sh-brown (2.5Y,		
35					- 135					
	I	L		1					<i>\(\(\(\(\) \) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\) \(\)</i>	1

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	ct Nar	ne:			Pr	oject Location:	ELL CONSTRUCT			AE-GW4 Project No.	_
MAS Drille	S/O0 r:	CWE)			501-1521 Ea pe of Rig:	ast Orangethorpe	Avenue, Fullert Type/Size of Auger:	on, California	2736	_
Cas	cad				Ċ	ME-95		8-Inch O.D. H	S		
	ed By: Vlar e		PG, 533	9		ate Drilled: 5/08/2009		Checked By:		1 of 3	
		٧	VATER	AND W	ELL DATA		Total Depth of Well Con	npleted: 66	Feet (Tempo	orary)	
Depti	h of W	ater F	irst Encour	ntered: ≈	63 Feet		Screen Type, Dia., Inter	val: 2-Inch	Sch 40 PVC 6	61 to 66 Feet	
Static	Dept	h of W	/ater in Wel	⊫ 62.4 F	eet BGS		Slot Size and Filter Paci	k: 0.010-lnd	h, #2/16 Silid	ca Sand	
Total	Depth	of Bo	oring: 66	Feet			Type/Size of Soil Samp	ler: 2-Inch I	.D. x 18-Inch	Split Barrel	
ēt		SOI	L/ROCK S	AMPLE D		3	DESCRIPTION	OF LITHOLOGY			
in Fe	<u></u>	ا ن		Field PID (ppm)	Graphic Log	Standard	d classification, texture,	relative moisture, der JSCG designation	nsity, stiffness,	WELL/BORING GRAPHIC	i di
Depth in Feet	Interval	Blow Ct.	Time	Fiel Piel	Graphic Log Denth in Feet	And (40-50%)	With	Some (10-25%)	Trace (0-10%)		Dosorintion
0			-			(10 0070)	sphalt Surface ≈4 In.	(10-23%)	(0-10/6)		
5			NA 1 5				r-Knife to 8 Feet It, some fine sand (ML), o odor (hand auger 05/0		, (2.5Y, 4/2), dry, 		Bentonite
10	7	<u>4</u> 6 7	07:58	0	1		lay, some silt (CL), olive dor	-brown, (2.5Y, 4/3), r	noist, soft, no		torite Cro.#
15		<u>5</u> 7 9	08:02	0.6	11		lay and silt (CL-ML) darl oist, no odor	k grayish-brown, (2.5	iY, 4/2), slightly		Coming Desiration with Bentanite
20		61617	08:05	0.5	2		lay, some silt, (CL), olive	ə-brown (2.5Y, 4/3), ı	moist, soft, no		
		•									

	Name:					ct Location:				AE-GW4 Project No.	
/IAS/ oriller:	/OCW	<u>D</u>					Orangethorpe	Avenue, Fullerto	on, California	a 2736	
Casc	ade				CM	of Rig: E-95		8-Inch O.D. HS	3		
ogged		PG, 533	a			Drilled: 08/2009		Checked By:	, , , , , ,	2 of 3	
1		IL/ROCK S		ATA		30/2003	DESCRIPTION	N OF LITHOLOGY		2013	
Depth in Feet			۵.	ي	Depth in Feet	Standard class		relative moisture, der	eity etiffness	WELL/BORING	5
.⊑ . ⊊	Interval Blow Ct.	0	Field PID (ppm)	Graphic	th in		odor-staining,	USCG designation		GRAPHIC	Description
<u>ස්</u> ස්	Interval Blow Ct	Time	i i i i	[©]	Dep	And (40-50%)	With (25-40%)	Some (10-25%)	Trace (0-10%)		O P
25	9/14/17	08:09	0.7		25		ne fine sand (ML), noist, no odor	dark grayish-brown (2	2.5Y, 4/2),		
30	5[5]5	08:13	0.8		30	Clay (CL	.), olive-brown (2.	5Y, 4/3), moist, soft, n	o odor		
35	9/17/19	08:17	0.6		- 35	Fine to n	nedium sand (SP), light olive-brown (2.	5Y, 5/3), dry,		filled with Bortonite Grout
10	11/17/20	08:20	0.4		40	Fine to n no odor	nedium sand (SP), light olive-brown (2.	5Y, 5/3), dry,		Poring Pool/fillod with
15	10/10/12	08:24	0.6		45	Clav with	. — — — — h silt (CL), olive-b		 t, no odor		
50	1 <u>2</u> 16 18	08:28	1.0		50), grayish-brown (2.5\			

			BORING	LOG A	ND MOI		RING WELL CONSTRUCTION	LOG	Boring No.	NE-GW4	
	ct Na S/O)				ct Location: 1-1521 East Orangethorpe Aven	nue. Fullerto	on. California	Project No. 2736	
Drille	r:					Туре	of Rig: Type,	/Size of Auger:			
Logg	scad jed By	e :		.				nch O.D. HS ked By:	<u> </u>		
М. І	Mare		PG, 533			05/0	08/2009			3 of 3	
Feet	l	SOL	L/ROCK S	1	1	eet .	DESCRIPTION OF LI	THOLOGY			_
Depth in F	Interval	× Çt	<u>o</u>	Field PID (ppm)	Graphic Log	Depth in Feet	Standard classification, texture, relative odor-staining, USCG	designation		WELL/BORING GRAPHIC	Description
Det	Inte	Blow	Time	II.		Deg	And With (40-50%) (25-40%)	Some (10-25%)	Trace (0-10%)		Des
- - - 55		10 10 15	08:31	0.6		- 55	Fine to medium sand (SP), grayis odor	sh-brown (2.5Y	/, 5/2), dry, no		
- -		15				<u>-</u>	Clay with silt, some sand (CL), ol no odor	live-brown (2.5	Y, 4/3), moist,		
· 60 - -		19 21 26	08:36	0.5		- 60	Fine to medium sand, trace coars olive-brown (2.5Y, 5/3), moist, no		ight		ite Grout
-					7/7/7/	 - 	Water saturated at 63 feet		— — — — —		Backfilled with Bentonite
65		7 10 13	08:40	1.1		65	Clay, some silt, trace fine sand (0 3/3), moist		DIOWII (2.5,		filled v
_		13					EOH Approx 66 F				gg [
_							Groundwater encountered at app	proximately 63	feet BGS.		l g
-						-	Groundwater samples collected	from a tempore	ary well		Boring
-						-					
70						70					
-						-					
_						ļ.					
_					1						
_											
· 75						- 75					
_						-					
-						-					
-						_					
_						_					
- 80						- 80					
_											
	L			L				- -	vironmental Sup	mant Tacherstee	

			BORING	LOG A	ND MOI			LL CONSTRUCT	TION LOG	Boring No. FA	E-GW4A	
Proje)				ect Location: 01-1521 Ea	ast Orangethorpe	Avenue, Fullerto	n. California	Project No. 2736	
Driller Cas	r:					Туре	of Rig: nic Drill		Type/Size of Auger: 8-Inch, 6-Inch,		•	
Logg	ed By		PG, 533	Ω		Date	Drilled:	05/01/0000	Checked By:	4 11011 00111		
IVI. I	viaie				ELL DA1		20/2009 -	05/21/2009 Total Depth of Well Cor	npleted: NA		1 of 4	
D#												
					130 Feet			Screen Type, Dia., Inter	,	uncn		
Static	Dept	h of W	ater in Wel	: NA				Slot Size and Filter Pac	k: NA			
Total	Depth	of Bo	oring: ≈ 1	45 Feet	<u> </u>			Type/Size of Soil Samp	ler: Sonic Co	ore		
Feet	- 1	SOI	L/ROCK S		ATA	Į į		DESCRIPTION	OF LITHOLOGY			
ii B	_	ᇙ		J PID	Graphic	in Fe	Standard	classification, texture,	relative moisture, den JSCG designation	sity, stiffness,	WELL/BORING GRAPHIC	
Depth in	Interval	1-1 - 1 - 1 - 1						With	Some	Trace		Description
	-							(25-40%)	(10-25%)	(0-10%)	1 1 1 1 1 1	+
0						0						Concrete
						_						
						_		Boring not logged (See Boring Log F				
:						-						
:						-						Sentonite
						-						Berry
-						F						
65	\dashv					- 65	65 - 66 Fee	et: Well graded sand	(SW) light olive-brown	n (2.5Y, 5/3)		
.	\				77777	-						
.	$\setminus \mid$		12:45	NA		-	66 - 73 Fee	t: Clay, trace silt (CL), olive-brown (2.5Y,	I/3), water		ptonito Grout
.	$ \cdot $					}		saturated top 6 inc	ches, moist below this	interval, stiff		
-	\setminus					L						
70						70						
_	\					L						Backfilled with
.												<u> </u>
_							73 - 77 Fee	t: Clay with sand so	ome silt (CL-SC), olive	brown /2 5V		
.	$ \cdot $					L	70-77166	4/3), moist to very		DIOWII (2.51,		
- -			14.40									
75			14:40	NA .		75						
•							77 - 79 Fee	•	e fine sand, trace fine (2.5Y, 3/3), moist, no c			
-					\////	T			• •			
-	1				HH	†	79 - 80 Fee	t: Fine sand sna silt, 4/3), moist, no ode	some clay (SM), olive	-brown (2.5Y,		
80	\forall		08:58	0.8		80	80 - 83 Fee		ive-brown (2.5Y, 3/3),	moist, stiff, no		
- 1	\	- 1		I	7////	1	I	ouoi			<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	/ /

Project N			BORING	i LOG A	AND MO		RING WELL oct Location:	CONSTRUCT	TION LOG	Boring No.	E-GW4A Project No.	
MÅS/)			150	1-1521 East	Orangethorpe	Avenue, Fullert			
Driller: Casca						Sor	of Rig: nic Drill		Type/Size of Auger: 8-Inch, 6-Inch		c Pipe	
Logged M. Ma			PG, 533	9			Drilled: 20/2009 - 05/	21/2009	Checked By:		2 of 4	
# L		SOII	.√ROCK S	AMPLE D	ATA	t t		DESCRIPTION	OF LITHOLOGY			
Depth in Feet	l g	<u>ت</u> ِ	_	Field PID (ppm)	Graphic Log	Depth in Feet	Standard cla		relative moisture, der JSCG designation	nsity, stiffness,	WELL/BORING GRAPHIC	Description
Depth i		Blow	Time	ei i	Ō	Dept	And (40-50%)	With (25-40%)	Some (10-25%)	Trace (0-10%)		Desc
	$\left \right $						80 - 83 Feet: 83 - 85 Feet:	odor	ve-brown (2.5Y, 3/3), trace clay (ML-SM), no odor			
35 -	\ \ \		15:05	NA		-85 -		No Sample Recov	ery 85 to 90 ft.			
00	RECOV		15:34	NA		90	90 - 93 Feet: 93 - 94 Feet: 94 - 97 Feet:	3/3), moist to very Fine sand, some s dry, no odor Silt, some clay, tra	me silt (SC), dark oli moist, no odor silt (SP-SM), olive-bro ace fine sand (ML), ol 2.5Y, 3.5/3), slightly	own (2.5Y, 4/3), live-brown to		entonite Grout —
95			15:50	NA		-95 -		no odor Silt, trace fine sand slightly moist to m	d, (ML), olive-brown oist, no odor	(2.5, 4/3),		Boring Backfilled with Bentonite
05			16:17	NA		-100 - -	103 - 105 Feet:	moist, no odor Silt with fine sand 5/3), slightly moist	L), dark olive-brown (ML-SM), light olive-late dry, no odor and with silt (SM), light olive-late (SM), light olive	brown (2.5Y, ht		
ON	RECOVERY				**************************************						oport Technolog	

Proje	ct Na						ct Location:	CONSTRUC		j FA	E-GW4A Project No.	
MA:	S/O	CWD	_			150	1-1521 East	Orangethorpe	Avenue, Fullert Type/Size of Auger:	on, California		
Cas	cad					Sor	of Rig: nic Drill		8-Inch, 6-Inch		Pipe	
Logg M. I	ed By Mar e		PG, 533	9			Drilled: 20/2009 - 05/	21/2009	Checked By:		3 of 4	
ᅜ		SOI	L/ROCK S	AMPLE D	ATA	ᇥ		DESCRIPTION	OF LITHOLOGY			
h in Fe	val	ರ	_	Field PID (ppm)	Graphic Log	Depth in Feet	Standard clas		relative moisture, der JSCG designation	nsity, stiffness,	WELL/BORING GRAPHIC	
Dept	Interval	Blow	Time	e F		Dept	And (40-50%)	With (25-40%)	Some (10-25%)	Trace (0-10%)		
Drille Cass Logg M. I 110 115			07:45	NA		110	-	stiff, no odor Well graded and	_), olive-brown (2.5Y, gravel, some silt (SW ght brownish-grey (2.5	-GW), gravel to		
20			08:07	NA		120						
30			08:34	NA		130	130 - 135 Feet:		l and gravel, some sil (, 4/3), water saturated			
35						135		water saturated, r	nd (ML), dark olive-bı			

EM2/	SC)IL E	BORING	LOG A	ND MOI	NITORING WELL CONSTRUCTION LOG				Boring No. FAE-GW4A		
	Project Name: MAS/OCWD						Project Location: 1501-1521 East Orangethorpe Avenue, Fullerton, Californi				Project No. 2736	
Drille	Driller: Cascade						of Rig:	4-Inch Sonic				
Logg	ogged By: M. Marello, PG, 5339						Drilled: 20/2009 - 05/21/200	Checked By:	1 111011 001110	4 of 4		
	SOIL/ROCK SAMPLE DATA								I OF LITHOLOGY		1	
E E			,	Field PID (ppm)	Graphic	Depth in Feet	Standard classification, texture, relative moisture, density, stiffness,			sity, stiffness,	WELL/BORING GRAPHIC	Description
Depth in Feet	Interval	Blow Ct.	Time				odor-staining, USCG designation And With Some Trace			Trace		
D	=		ıπ				(40-50%) (25	5-40%)	(10-25%) d (ML), dark olive-bro	(0-10%) wn (2.5Y,		ŏ
NESISHWA (ATO) LOCAL CASAS A CASON TO CASAS A CAS		Blo	11:30	NA NA		lac	(40-50%) (28 136 - 138 Feet: Silt, son 3/3), vei 138 - 142 Feet: Fine sar water sa 4/2 - 145 Feet: Well gra 4/3), wa	5-40%) The fine sand ry moist to and, some signaturated, no added sand, atter saturated.	(10-25%) d (ML), dark olive-browet, no odor lit (SP-SM), olive-browoodor	(0-10%) wn (2.5Y, vn (2.5Y, 4/3), orown (2.5Y,		Boring Backfilled with Bentonite Grout — Des
											port Technolog	